TSJ/EMD/C-23/194/24
September 27, 2024

The Member Secretary
Jharkhand State Pollution Control Board
T.A. Division Building
HEC Campus, Dhurwa
Ranchi - 834004

Subject: Submission of Environment Statement for Tata Steel Limited, Jamshedpur for the year 2023-24

Dear Sir,

With reference to captioned subject, we are submitting herewith the Environment Statement for Tata Steel Limited, Jamshedpur for the year 2023-24 duly filled in the prescribed format for your kind consideration.

You are requested to kindly acknowledge the same and place in your records.

Thanking you

Yours faithfully,
For Tata Steel Limited

Utsav Kashyap
Head Environment Clearance & Compliance (TSL)

Enclosures as above

Copy to: Regional Officer, Jharkhand State Pollution Control Board, Jamshedpur

TATA STEEL LIMITED
Environment Management Jamshedpur 831 001 India
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Registered Office: Bombay House, 24 Homi Mody Street, Mumbai 400001
Tel 91 22 66658282 Fax 91 22 66657724
Corporate Identity Number L27100MH 1907PLC000260 Website www.tatasteel.com

ENVIRONMENTAL STATEMENT
FOR THE YEAR 2023-2024

TATA STEEL LIMITED
JAMSHEDPUR

Submitted by:
ENVIRONMENTAL MANAGEMENT DEPARTMENT
TATA STEEL LIMITED
JAMSHEDPUR-831001
JHARKHAND

[Form V]

Environment Statement for the Financial Year ending 31st March 2024

PART-A

(i)	**Name & address of the owner/occupier of the industry operation or process:**	Mr. T.V. Narendran CEO & MD Tata Steel Limited Jamshedpur-831001 East Singhbhum, Jharkhand
(ii)	**Industry Category**	Red Category
	Primary STC Code:	3312
	Secondary SIC Code	331200
(iii)	**Production Capacity**	Production Capacity: 11 MTPA Crude Steel (Major units are: RMM, Blast Furnaces, Coke ovens, Sinter Plants, Pellet Plant, LD Shops, HSM, CRM, WRM, MM, NBM, CAPL*, Captive Power Plant, Captive Railway Sidings and Utilities, JAMIPOL**) **CAPL is being owned and operated by M/s Jamshedpur Continuous Annealing and Processing Company (JCAPCPL), a joint venture formed by Tata Steel and Nippon Steel and Sumitomo Metal Corporation (NSSMC) to manufacture and market high-quality, automotive- grade continuous annealed products inside premises of Jamshedpur steel works.* ***Lime Grinding Plant and Bentonite Grinding Plant, JAMIPOL a joint venture of Tata Steel*
(iv)	**Year of Establishment**	1907
(v)	**Date of last Environment Statement submitted**	September 28, 2023, vide letter no. TSJ/EMD/C-23/175/23

PART-B

WATER & RAW MATERIAL CONSUMPTION

i) Water Consumption (m^3/day)
Process & Cooling : 47,133
Domestic Consumption: 10,008

Name of the product	**Process water consumption/unit of product output (m^3/tcs)**	
Crude Steel	During the Previous Financial Year (2022-23)	During the Current Financial year (2023-24)
	1.97	1.62

ii) Raw Material Consumption (Works):

Name of raw material	Name of products	Consumption of raw material per unit of output (kg/ton of crude steel)	
		During the Previous Financial Year (2022-23)	During the Current Financial year (2023-24)
Iron Ore	Crude Steel	1820.44	1424.46
Coking Coal		566.14	584.25
Limestone		179.03	197.89
Non-Coking Coal		192.25	199.92
Dolomite & Pyroxenite		289.33	135.70
Purchase Pellet		26.36	0.90
Quartzite and Other materials		11.75	59.58
Zinc & Zinc Alloys		0.60	0.50
Ferro Manganese - High Carbon Lumps		0.76	0.84
Ferro Manganese - Medium Carbon		0.81	1.77

PART-C

Pollution discharged to environment/unit of output.

Pollution	Quantity of pollutants discharged (mass/day)		Concentrations of pollutants in discharges (mass / volume)		% of variation from prescribed standards
	(Tons/day)		(mg/L)		
(a) Water	**2022-23**	**2023-24**	**2022-23**	**2023-24**	
TSS	0.96	0.94	62	65	-35
COD	1.66	1.42	110	86	-66
BOD	0.20	0.17	13	10	-67
Oil & grease	0.03	0.04	2.0	3.0	-70
(b) Air	**2022-23**	**2023-24**	**2022-23**	**2023-24**	
	(Tons/day)		(mg/Nm^3)		
PM	6.65	5.69	10.66	8.63	-91%
SO_2	16.80	15.48	84.25	73.85	-
NOx	15.86	14.14	79.62	67.47	-

PART-D

Hazardous Waste

[As Specified under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016]

Hazardous Waste	Total Quantity (Tonnes)	
	During the Previous Financial Year (2022-23)	During the Current Financial year (2023-24)
(a) From Process		
Kiln Dust	19,465	20,179
GCP Sludge*	5,93,687	5,72,500
Mill Sludge	2,949	3255
Used Oil	1,134	2308
Waste Grease	139.20	169
Muck Waste	10,852	12,703
Tar Sludge	2219	9632
Zinc dust Ash	19	901
Iron Hydroxide Sludge	338	0
Chrome Sludge	101.0	109
(b) From Pollution Control Facilities		
APCE Dust	1,89,284	4,19,955
BOD Sludge	413	35
*GCP Sludge includes sludges from LD Shops and Blast Furnaces		

PART-E

Solid Wastes

(a) From Process	**Total Quantity (tonnes)**	
	During the Previous Financial Year (2022-23)	During the Current Financial year (2023-24)
BF Slag	43,68,945	40,00,570
LD Slag	16,40,534	16,85,849
Lime Fines	2,20,114	2,38,293
Mill Scale	1,05,523	1,12,542
Fe bearing Muck	12,654	11,356
(b) From Pollution Control Facilities- Nil		
(c) Quantity recycled or re-utilized within the unit		
	During the Previous Financial Year (2022-23)	During the Current Financial year (2023-24)
BF Slag	10,106	8036
LD Slag	1,90,117	1,52,592
Lime Fines	2,06,357	2,21,142
Mill Scale	1,05,368	1,13,441
Fe bearing Muck	12,618	11,179

Sold		
	During the Previous Financial Year (2022-23)	During the Current Financial year (2023-24)
BF Slag	44,23,258	44,27,276
LD Slag	16,31,726	18,73,208
Lime Fines	15,559	13,899
Mill Scale	0	0
Fe bearing Muck	0	0
Disposed		
	During the Previous Financial Year (2021-22)	During the Current Financial year (2022-23)
BF Slag	0	0
LD Slag	0	0
Lime Fines	0	0
Mill Scale	0	0
Fe bearing Muck	0	0

PART-F

Chemical Composition of majority of waste as produced in process of Tata Steel's Jamshedpur operation is given below:

Name of Wastes	Chemical Composition (%)	Disposal Method
Coal Tar Sludge	C – 90-95; Moisture – 1.3 S – 0.3-0.7; CV – 8800 KCal/kg Sp. Gr. – 1.2; Ash – 0.04-0.05	Mixed with coal & used in Coke Plant
BOD Sludge	VM – 50; Ash – 26 Moist. – 20; CV – 5800 KCal/kg	Mixed with coal & used in Coke Plant
B F Slag	CaO – 32; MgO – 9 SiO_2 – 34.5; MnO – 0.25 P_2O_3 – Nil; Al_2O_3 – 1.2 S – 1.4; TiO_2 – 1.2; FeO – 0.33	• Sold to cement plant. • Used in construction
GCP Sludge from Blast Furnace	Fe(T) – 33.65; MnO – 0.14 CaO – 3.45; Al_2O_3 – 3.64 SiO_2 – 6.40; S – 0.230; P_2O_5 – 0.307 TiO_2 – 0.30; MgO – 1.40 Alkali – 0.5 to 0.7; C – 21-24	• Used in Sinter Plant • Used in Pellet Plant
L D Slag	Fe(T) – 18-25; MgO – 1-2 CaO – 45-55; MnO – 0.5-1.0 SiO_2 – 10-12; Al_2O_3 – 0.8-1.0 P_2O_5 – 3.5-4.0; S – 0.2 TiO_2 – 0.8-1; Alkali – 0.18	• Used in construction. • Used in Sinter Plant
GCP Sludge from LD Shops	Fe(T) – 55 to 60; MgO - <1.0 CaO – 10-15; MnO - <0.5 SiO_2 – 1.5-2.0; Al_2O_3 - <0.5 P_2O_5 – 0.29; TiO_2 - <0.1	• Used in Sinter Plant

Mill Scale	Fe(T) – 72-75; MnO - <0.5 SiO_2 - <0.5; Al_2O_3 - <0.5 MgO – 0.1; Oil – 10-12	• Used in Sinter Plant
Mill Sludge	Fe(T) – 42.76; MgO – 0.35 CaO – 0.65; MnO – 0.27 SiO_2 – 1.12; Al_2O_3 – 0.50 P_2O_5 – 0.089; TiO_2 – 0.03 Cr_2O_3 – 0.03; Oil – 10-12	• Used in Sinter Plant
Lime Fines	CaO – 66.5; Al_2O_3 – 0.26 SiO_2 – 1.53; MgO – 5.68	• Sold • Used in Sinter Plant

PART-G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

Sl. No.	Pollution abatement Measures taken in 2022-23	Impact on conservation of natural resources & others
1	Upgradation of CETP phase 2 from 4 MGD to 9 MGD is in progress	Will subsequently reduce freshwater consumption
2	Upgradation of water system at LD1 & LD2	Reduction in freshwater consumption
3	Setting up of 17.68 MWDC / 13.1 MWAC Solar Power Plants at various locations inside TSJ Works are in progress	Will subsequently reduce the amount of energy used from the grid.
4	Increasing steel scrap usage, biochar, and hydrogen injection in blast furnaces	Will subsequently reduce coke rate

PART-H

Additional Measures Investment Proposal of Environmental Protection Including Abatement of Pollution

- Upgradation of the existing pollution control equipment to bring down dust level.
- Improvement in water recycling facility for reducing the wastewater discharge.

PART-I

Any other particulars for improving the quality of environment.

- Replacement of 10 years above old & outlived Split/window AC to increase the efficiency and reduction in power consumption is in progress.
- LD Slag after metal recovery is being used internally in the manufacturing process as well as externally in brick and road making works.

- BF Slag is being granulated through online slag granulation facilities available at BFs and made available to the Cement plants for cement making.
- We have planted 1,55,483 nos. saplings during FY'24 inside the works, Jugsalai Muck Dump area and in Township.

Details of Plantation (nos.) done during April 2022 – March 2023

Month	Plantation in Town and JMD	Plantation in Works	Species
Apr-23	575	960	*Karanj,conocarpus, Syzygium, fox tail Palm , Arica Palm*
May-23	1080	1223	*Mahagoney,Conocarpus,Juniperious,Kanel,Hibicus,Tecoma,Foxtail Palm*
June-23	11,098	2205	*Conocarpus, Juniperious, Cassia fistula, Techoma, Sita Ashok, Terminalia argintia, Bottel brush, Mahagoney , Arjun,Karanj, Putranjiva,Arica Palm, Sizygium , fox tail Palm*
July-23	31,887	2459	*Putranjiva,conocarpus, ashoka, Juniperious, Syzygium Sp.,Arica Palm, Exeroa*
August-23	22,604	961	*Arjun, Karanj,conocarpus, Syzygium, fox tail Palm , Arica Palm ,Juniperious, Puterenjevia*
Sept-23	30,300	1045	*Plumeria, Conocarpus, Juniperious, Cassia fistula, Techoma , Arjun,, Hemliya Spathodia , Sizygium , fox tail Palm Puterenjevia ,*
Oct-23	10,994	1392	*Conocarpus, Cassia fistula, Arjun, Karanj, Putranjiva,Arica Palm, Syzygium , fox tail Palm,Juniperious .*
Nov-23	7550	948	*Juniperious (Thuja), conocarpus, Syzygium, Auricaria, foxtail palm*
Dec-23	5100	1052	*Conocarpus, Putranjiva,Arica Palm, Syzygium , fox tail Palm,Juniperious .*
Jan-24	5465	1180	*Fox tail Palm, Juniperious, Conocarpus, Putranjiva,Arica Palm, Syzygium .*
Feb-24	6531	839	*Conocarpus, Kamani Arica Palm Arjun, Puternjiva , Foxtail palm,*
March-24	6944	1091	*Concarpus, Fox tail Palm, Techoma*
Total	**1,40,128**	**15,355**	**1,55,483**